

REMARKS

The Final Office Action mailed June 27, 2002, has been received and reviewed. Claims 1 through 29 are currently pending in the application. Claims 1 through 29 stand rejected. Concurrently herewith, Applicant is submitting a Request for Continuing Examination. New claim 30 has been added and claims 1, 8, 16-18, 27, and 28 have been amended in the present Amendment. In view of the amendments to the claims and the arguments herein, applicant respectfully requests reconsideration of the application.

35 U.S.C. § 251 Rejection

Claims 1 through 29 stand rejected under 35 U.S.C. § 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. Specifically, the Examiner stated that applicant is attempting to recapture claimed subject matter that relates to the openings in the bond pads extending through the bond pads rather than just to the bond pads. In their current form, independent claims 1, 8, 16, 17, 27, and 28 recite that the openings extend partially into the bond pads or bond pad surfaces, as opposed to extending through the same. In view of the amendments to the claims, applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 251..

35 U.S.C. § 102(b) Anticipation RejectionsAnticipation Rejection Based on Japanese Patent No. 63-161634 to Kishi

Claims 1, 2, 7, 8, 13, 15-18, and 23-27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kishi (Japanese Patent No. 63-161634). Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The examiner relies on Kishi for disclosure of an “integrated circuit device which includes through-holes in the bonding pad.” (Office Action at pg. 3). The examiner further states that recitation of openings in the bond pads that extent “into” the bond pad includes those that have a variety of depths including those that extend all the way through the bond pad. As illustrated in Figures 1a and 1b of Kishi, an aluminum pad electrode 4 has slitty through-holes 7 that are adapted to absorb bonding stress. The through-holes 7, as the name indicates and as the figures illustrate, extend through the bond pad. As previously discussed, in their current form, independent claims 1, 8, 16, 17, 27, and 28 recite that the openings extend partially into the bond pads or bond pad surfaces, as opposed to extending through the same. As such, Kishi does not describe each and every element of the pending claims. In view of the foregoing, Kishi does not anticipate claims 1, 2, 7, 8, 13, 15 through 18, 23 through 27, and withdrawal of the rejection to the same based on 35 U.S.C. § 102(b) is respectfully requested.

Drawings

The proposed drawing correction filed on January 11, 2002 has been accepted. Applicant submits herewith a Transmittal of Replacement Formal Drawing with formal FIG. 1 revised as proposed.

ENTRY OF AMENDMENTS

The proposed amendments to claims 1, 8, 16-18, 27, and 28 above and the addition of claim 30 should be entered by the Examiner because the amendments and new claim are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments and new claim do not raise new issues or require a further search.

CONCLUSION

Claims 1-30 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully Submitted,



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ERC/ps:dn

Enclosure: Version With Markings to Show Changes Made

N:\2269\3656\Amendment filed with RCE.wpd

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Three Times Amended) A semiconductor device having an improved bond pad, the semiconductor device comprising:
 - a. a bond pad electrically connected to an active circuit in the semiconductor device;
 - b. a substantially flat bonding surface on the bond pad; and
 - c. an opening extending partially into the bonding surface.
8. (Twice Amended) A semiconductor device, which comprises:
 - a. an active circuit in the semiconductor device;
 - b. a wiring pattern overlying and in electrical contact with the active circuit;
 - c. bond pads formed as select areas on the wiring pattern; and
 - d. a plurality of openings extending partially into a substantially flat bonding surface of the bond pads.
16. (Three Times Amended) A semiconductor device, comprising:
 - a. a layer of insulating material;
 - b. a substantially flat layer of conductive material over lying the layer of insulating material;
 - c. bond pads formed as select areas on a surface of the layer of conductive material; and
 - d. at least one opening extending partially into the bond pads.
17. (Three Times Amended) An improved bond pad comprising:
a metal layer having a substantially planar surface, said metal layer electrically connected to an active circuit of a semiconductor device and having at least one opening extending partially into said metal layer.
18. (Amended) An improved bond pad according to claim 17, further comprising a plurality of openings extending partially into [in] the metal layer of the bond pad.

27. (Three Times Amended) A semiconductor device having an improved bond pad, the semiconductor device comprising:

a bond pad electrically connected to an active circuit of the semiconductor device, said bond pad having a substantially planar surface; and
at least one opening extending partially into said bond pad.

28. (Three Times Amended) A semiconductor device having an improved bond pad, the bond pad having a metal layer, said metal layer having a substantially planar surface connected to an active circuit of a semiconductor device further having at least one opening extending [therethrough] partially into the metal layer, the semiconductor device made according to the method comprising:

forming [a thick] an insulating layer over active circuitry of a semiconductor chip;
etching said [thick]insulating layer thereby forming clear contact paths to said active circuitry of the semiconductor chip;
forming a metal layer over said [thick]insulating layer; and
etching said metal layer thereby forming an interconnect wiring pattern and bond pads having at least one opening extending partially into said bond pads.